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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,868	10/12/2005	Anthony Patrick Jones	PB60275USw	2255

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EXAMINER	
COOLEY, CHARLES E	

ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
03/13/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/552,868	JONES ET AL.	
	Examiner	Art Unit	
	Charles E. Cooley	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-18,20-46 and 48-59* is/are rejected.

7)☒ Claim(s) *7,19 and 47* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20051012*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

NON-FINAL OFFICE ACTION

1. This application has been assigned to Technology Center 1700, Art Unit 1797 and the following will apply for this application:

Please direct all written correspondence with the correct application serial number for this application to **Art Unit 1797**.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at http://www.uspto.gov/ebc/index.html or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimiles should be transmitted to the centralized fax receiving number 571-273-8300.

Priority

2. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d). All of the CERTIFIED copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

Information Disclosure Statement

3. Note the attached PTO-1449 form submitted with the Information Disclosure Statement filed 12 OCT 2005.

Specification

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The substitute abstract is acceptable.

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed (MPEP 606.01).

Claim Rejections - 35 USC § 102

7. The terms used in this respect are given their broadest reasonable interpretation in their ordinary usage in context as they would be understood by one of ordinary skill in the art, in light of the written description in the specification, including the drawings, without reading into the claim any disclosed limitation or particular embodiment. See, e.g., *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004); *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000); *In re Morris,* 127 F.3d 1048, 1054-55 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989).

The Examiner interprets claims as broadly as reasonable in view of the specification, but does not read limitations from the specification into a claim. *Elekta Instr. S.A.v.O.U.R. Sci. Int'l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5, 8-12, 14, 17, 18, 20-27, 35-37, 39, 41-43, 46, 48-54, 56, 58, and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Snowball (US 6,504,136 B2).

The patent to Snowball discloses an energy delivery system for delivering energy to content in a vessel, the system having a contactlessly-powerable energy emitting device 14 which is adapted to be positioned inside the vessel 10 and contactlessly-powered via 16 when inside the vessel to emit energy to the content, and has a control mechanism adapted in use to control the operation of the energy emitting device in accordance with a prescribed regime (col. 3, lines 35-44 and 59-61); and (b) a power supply (Fig. 1) adapted in use to contactlessly-couple with the energy emitting device for powering thereof when inside the vessel; wherein the energy emitting device is adapted to emit energy which, in use, affects a condition of the content and the control mechanism is adapted in use to operate to vary the amount of energy emitted by the device to control the content condition affected by the energy (col. 3, lines 35-44 and 59-61); wherein the energy emitting device is adapted in use to emit thermal energy to the content (col. 3, lines 45-49); wherein the device is a self-contained device (Fig. 1); wherein the energy emitting device is comprised in a stirrer/impeller 14 having an external surface which emits energy; wherein the energy emitting device is electrically-

powerable and the power supply is adapted in use to contactlessly provide electrical power to the device (Fig. 1); wherein the device has an electrically-powerable energy emitting element 14 which, in use, emits energy in response to electrical current provided thereto under control of the control mechanism; wherein the device and power supply are adapted to be inductively coupled for powering the device (col. 3, lines 35-44); a base unit 15 in which the vessel is holdable and which includes the power supply; wherein the control mechanism is able to vary the amount of energy emitted by the device (col. 3, lines 35-44 and 59-61); wherein the control mechanism is an electrical control circuit operatively coupled to the electrically-powerable energy emitting element for controlling operation thereof in accordance with the prescribed regime (Fig. 1 and col. 3, lines 35-44 and 59-61); wherein the control circuit includes a controller (col. 3, lines 35-44 and 59-61); a sensor to produce condition signals representative of a condition of the content (col. 3, lines 59-61); wherein the sensor forms a part of the energy emitting device; wherein the sensor is a temperature sensor which produces temperature signals representative of the temperature of the content (col. 3, lines 59-61); wherein the temperature sensor is adapted in use to be operatively coupled to the energy emitting device to control the device so that it regulates the temperature of the content (col. 3, lines 59-61); wherein the sensor is operatively coupled to the control mechanism such that the condition signals are inputtable to the control mechanism and the control mechanism is adapted to control the amount of energy emitted by the device in response to the condition signals to regulate the sensed condition in accordance with a prescribed regime (Fig. 1 and col. 3, lines 35-44 and 59-61); wherein the prescribed

regime for the sensed condition is programmed in the controller; wherein the device has a regulator operable to regulate the amount of power transferred from the power supply to the electrically-powerable energy emitting element and the control mechanism is operably coupled to the regulator to cause, in use, the regulator to regulate the power transfer so that the energy emitting element emits energy in accordance with the prescribed regime (Fig. 1 and col. 3, lines 35-44 and 59-61); the operation of the regulator is controlled by control signals produced by the control mechanism in response to the condition signals (Fig. 1 and col. 3, lines 35-44 and 59-61); wherein the energy is such as to affect the sensed condition and the control mechanism is adapted to (i) receive the condition signals, and (ii) vary the amount of energy emitted by the device in dependence of the condition signals to regulate the sensed condition in accordance with the prescribed regime (Fig. 1 and col. 3, lines 35-44 and 59-61); wherein the control mechanism is adapted to operate to control the amount of energy emitted by the energy emitting device by regulating the power transferred to the device (Fig. 1 and col. 3, lines 35-44 and 59-61); an energy emitting mechanism 14 which is adapted to be contactlessly powered to emit energy into the fluid; the energy emitting mechanism is adapted to be contactlessly-powered by electromagnetic induction (col. 3, lines 35-44 and 59-61); wherein the energy emitting mechanism has an electrically-powerable energy emitting mechanism 14 which is contactlessly-powerable; comprising a control mechanism which is operatively coupled to the energy emitting mechanism for control thereof in accordance with a prescribed regime (Fig. 1 and col. 3, lines 35-44 and 59-61); wherein the electrically-powerable energy emitting mechanism has an

electrically-powerable energy emitting element 14 and the control mechanism has an electrical control circuit operatively coupled to the energy emitting element to control operation thereof (Fig. 1 and col. 3, lines 35-44 and 59-61); wherein the energy emitting mechanism is a microelectronic device 14; wherein the energy emitting mechanism 14 is a heating mechanism; a sensor for sensing a condition of the fluid and producing real-time condition signals representative of the condition (Fig. 1 and col. 3, lines 35-44 and 59-61); whereby, in use, the energy emitting mechanism is controlled in response to the condition signals (Fig. 1 and col. 3, lines 35-44 and 59-61); in use the condition signals are input to the control mechanism for processing thereof to produce a control signal for controlling operation of the energy emitting mechanism (Fig. 1 and col. 3, lines 35-44 and 59-61); wherein the control mechanism is adapted in use to control the energy emitting mechanism in response to the condition signals so that the energy emitted to the fluid is automatically regulated to maintain the fluid condition in accordance with a prescribed regime (Fig. 1 and col. 3, lines 35-44 and 59-61); the control mechanism has a regulator for regulating the power input to the energy emitting mechanism and thereby regulating the energy emitted by the energy emitting mechanism (Fig. 1 and col. 3, lines 35-44 and 59-61); wherein the sensor is a temperature sensor (col. 3, lines 59-61); the device capable of being used as a laboratory-scale reaction or a calorimeter.

10. Claims 1-4, 9-11, 14, 20-24, and 26-28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by EP 605977 for the reasons set forth in the ISR and

written opinion dated 22 OCT 2004, incorporated herein by reference (See US equivalent 5418593).

11. Claims 35-47 and 49-57 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by DE 3736170 for the reasons set forth in the ISR and written opinion dated 22 OCT 2004, incorporated herein by reference.

12. Claims 39-42 and 49 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by GB 2175815 for the reasons set forth in the ISR and written opinion dated 22 OCT 2004, incorporated herein by reference (See US equivalent 4678881).

13. Claims 39-42 and 49 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by DE 3430876 for the reasons set forth in the ISR and written opinion dated 22 OCT 2004, incorporated herein by reference.

14. Claims 39-42 and 49 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by DE 3314824 for the reasons set forth in the ISR and written opinion dated 22 OCT 2004, incorporated herein by reference.

Claim Rejections - 35 USC § 103

15. To determine whether subject matter would have been obvious, "the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved .... Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966).

The Supreme Court has noted:

> Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1740-41 (2007). "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." (Id. at 1742).

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

18. **Claims 6, 13, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snowball (US 6,504,136 B2) in view of Adrig (US 3,091,680).**

Snowball does not disclose the stirrer being a contactlessly-drivable stirrer. Adrig discloses a contactlessly-drivable rotor/stirrer 14 having a heater 66 therein for heating contents located proximate the stirrer. The stirrer is driven by a contactless magnetic drive 104. It would have been obvious and mere common sense to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted the direct drive stirrer arrangement of Snowball with a contactlessly-drivable stirrer arrangement as disclosed by Adrig for the purpose of providing a slip clutch between the drive member and driven member to control the amount of torque delivered to the driven member, e.g., to allow slip between the drive and driven members during periods when rotation of the stirrer are inhibited (col. 3, lines 14-75).

19. **Claims 15, 16, 28, 29, 30, 31, 32, 38, 44, 45, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snowball (US 6,504,136 B2) in view of Lee (US 5,004,881).**

Snowball does not disclose control via pulse width modulation (PWM) or the transistor switch. The patent to Lee discloses an inductive heating system including a programmable controller 4, a regulator being a power-on/power-off switch for the electrically-powerable energy emitting element 2 in the form of a transistor TR1; the control mechanism is adapted in use to operate to cause a continuous series of electrical pulses to be inputted to the electrically-powerable energy emitting element, the pulse durations and spacings being variable by the control mechanism to result in the energy emitted by the emitting element according with the prescribed regime and wherein the control mechanism operates to control the amount of energy emitted by pulse width modulation (PWM) 10 – col. 2, line 34 – col. 4, line 7). It would have been obvious and mere common sense to one having ordinary skill in the art, at the time applicant's invention was made, to have provided control of the energy emitting device via pulse width modulation and a transistor switch a taught by Lee for the purposes of controlling the power level of the energy emitting device via PWM such that control of low power output levels is facilitated, reduces flickering and beat noise, to eliminate transient phenomena, to thus allow smooth operation of the device (col. 4, lines 59-68).

20. **Claims 33, 34, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snowball (US 6,504,136 B2) in view of Strauss et al. (US 5,932,075).**

Snowball does not disclose the device having a transmitter and a receiver. The patent to Strauss et al. discloses a contactlessly-driven stirrer device (Fig. 1) having a transmitter 20a and a receiver. It would have been obvious and mere common sense to one having ordinary skill in the art, at the time applicant's invention was made, to have proved the device of Snowball with a transmitter and a receiver as taught by Strauss et al. for the purposes of enabling display or analysis of the operation of the device and to permit data logging of the operation (Col. 3, lines 49-57 and col. 6, lines 15-19).

Allowable Subject Matter

21. Claims 7, 19, and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley in Art Unit 1797 whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri.. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles E. Cooley/

Charles E. Cooley
Primary Examiner
Art Unit 1797

11 March 2009